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Federal Agencies

August 28, 2002

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Commissioner for Patents
Washington, D.C. 20231

Art Unit 2811

Re: U.S. Utility Patent Application
Appl. No. 09/997,272; Filed: November 30, 2001
For: **Thermally and Electrically Enhanced Ball Grid Array Packaging**
Inventors: Zhao *et al.*
Our Ref: 1875.2200001/JSW

RECEIVED
AUG 29 2002
TC 2800 MAIL ROOM

Sir:

Transmitted herewith for appropriate action are the following documents:

1. SKGF Cover Letter;
2. Supplemental Information Disclosure Statement;
3. Form PTO-1449, listing cited documents (3 pages);
4. Copies of thirty four (34) cited documents on Form PTO-1449 (AA1-AI1, AA2-AI2, AA3-AG3, and AJ1-AR1); and
5. One (1) return postcard.

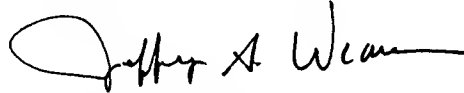
It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier. In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

Commissioner for Patents
August 28, 2002
Page 2

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Jeffrey S. Weaver
Attorney for Applicant
Registration No. 45,608

JSW:kae
Enclosures

::ODMA\MHODMA\SKGF_DC1;50322;1
SKGF Rev. 2/15/02 dcw



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re application of:

Zhao *et al.*

Appl. No. 09/997,272

Filed: November 30, 2001

For: **Thermally and Electrically
Enhanced Ball Grid Array
Packaging**

Confirmation No. 2600

Art Unit: 2811

Examiner: *To be assigned*

Atty. Docket: 1875.2200001

Supplemental Information Disclosure Statement

Commissioner for Patents
Washington, D.C. 20231

Sir:

Listed on accompanying Form PTO-1449 are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98.

Where the publication date of a listed document does not provide a month of publication, the year of publication of the listed document is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the month of publication is not in issue. Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

Applicants have checked the appropriate boxes below.

- ☒ 1. This Information Disclosure Statement is being filed within three months of the date of filing of a national application other than a continued prosecution application (CPA), OR within three months of the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in an international application, OR before the mailing date of a first Office Action on the merits OR before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114. No statement or fee is required.
- 2. This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application.
 - ☐ a. I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).
 - ☐ b. I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

- ☐ c. Attached is our Check No. _____ in the amount of \$ _____ in payment of the fee under 37 C.F.R. § 1.17(p).
- ☐ 3. This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. Enclosed find our Check No. _____ in the amount of \$ _____ in payment of the fee under 37 C.F.R. § 1.17(p); in addition:
- ☐ a. I hereby state that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).
- ☐ b. I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
- ☒ 4. Documents AJ1-AL1, and AA2 were cited in a search report by a foreign patent office in a counterpart foreign application. The search report is listed as document AR1. Submission of an English language version of the search report that indicates the degree of relevance found by the foreign office is provided in satisfaction of the requirement for a concise explanation of relevance. 1138 OG 37, 38.
- ☒ 5. A concise explanation of the relevance of the non-English language documents appears below:
- Document AJ1 (JP 11-17064) appears to describe a semiconductor package. A copy of the English language abstract of document AJ1 is enclosed as document AN1 on the attached PTO-1449.
- Document AK1 (JP 11-102989) appears to describe a BGA semiconductor device. A copy of the English language abstract of document AK1 is enclosed as document AO1 on the attached PTO-1449.

Document AL1 (JP 7-283336) appears to describe a chip carrier. A copy of the English language abstract of document AL1 is enclosed as document AP1 on the attached PTO-1449.

Document AM1 (JP 10-247702) appears to describe a ball grid array package and printed board. A copy of the English language abstract of document AM1 is enclosed as document AQ1 on the attached PTO-1449.

- ☐ 6. Copies of the documents were cited by or submitted to the Office in an IDS that complies with 37 C.F.R. § 1.98(a)-(c) in Application No. _____, filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).

It is respectfully requested that the Examiner initial and return a copy of the enclosed PTO-1449, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

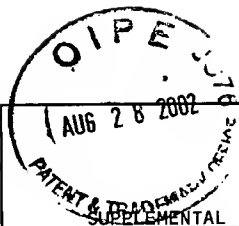
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Date: 8-28-02

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FORM PTO-1449 SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT		ATTY. DOCKET NO. 1875.2200001	APPLICATION NO. 09/997,272
		APPLICANT Zhao <i>et al.</i>	
		FILING DATE November 30, 2001	GROUP 2811

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA1	5,291,062	03/1994	Higgins, III			
	AB1	5,572,405	11/1996	Wilson <i>et al.</i>			
	AC1	5,583,377	12/1996	Higgins, III			
	AD1	5,691,567	11/1997	Lo <i>et al.</i>			
	AE1	5,835,355	11/1998	Dordi			
	AF1	5,883,430	03/1999	Johnson			
	AG1	5,894,410	04/1999	Barrow			
	AH1	5,901,041	05/1999	Davies <i>et al.</i>			
	AI1	5,905,633	05/1999	Shim <i>et al.</i>			

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AJ1	JP 11-17064	01/1999	Japan	H01L	23/14	Yes No
	AK1	JP 11-102989	04/1999	Japan	H01L	23/12	Yes No
	AL1	JP 7-283336	10/1995	Japan	H01L	23/12	Yes No
	AM1	JP 10-247702	09/1998	Japan	H01L	23/12	Yes No

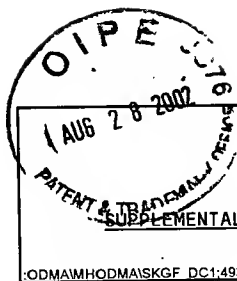
OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

AN	1	English-language Abstract of Japanese Patent Publication No. 11-017064, 1 Page (January 22, 1999 - Date of publication of application).
AO	1	English-language Abstract of Japanese Patent Publication No. 11-102989, 1 Page (April 13, 1999 - Date of publication of application).
AP	1	English-language Abstract of Japanese Patent Publication No. 07-283336, 1 Page (October 27, 1995 - Date of publication of application).
AQ	1	English-language Abstract of Japanese Patent Publication No. 10-247702, 2 Pages (September 14, 1998 - Date of publication of application).
AR	1	Copy of International Search Report issued July 25, 2002 for Appln. No. PCT/US01/44955, 4 pages.

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



FORM PTO-1449

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

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ATTY. DOCKET NO.
1875.2200001APPLICATION NO.
09/997,272APPLICANT
Zhao *et al.*FILING DATE
November 30, 2001GROUP
2811

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
	AA2	5,953,589	09/1999	Shim <i>et al.</i>			
	AB2	5,977,626	11/1999	Wang <i>et al.</i>			
	AC2	5,986,885	11/1999	Wyland			
	AD2	5,998,241	12/1999	Niwa			
	AE2	6,002,169	12/1999	Chia <i>et al.</i>			
	AF2	6,020,637	02/2000	Karnazos			
	AG2	6,084,777	07/2000	Kalidas <i>et al.</i>			
	AH2	6,133,064	10/2000	Nagarajan <i>et al.</i>			
	AI2	6,011,304	01/2000	Mertol			

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION
	AJ2						Yes No
	AK2						Yes No
	AL2						Yes No
	AM2						Yes No

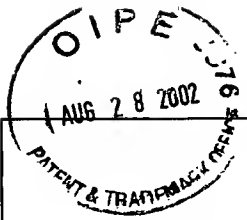
OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AN	<u>2</u>	
	AO	<u>2</u>	
	AP	<u>2</u>	
	AQ	<u>2</u>	
	AR	<u>2</u>	

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U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
	AA3	6,077,724	06/2000	Chen			
	AB3	6,160,705	12/2000	Stearns <i>et al.</i>			
	AC3	6,162,659	12/2000	Wu			
	AD3	6,163,458	12/2000	Li			
	AE3	6,166,434	12/2000	Desai <i>et al.</i>			
	AF3	6,184,580 B1	02/2001	Lin			
	AG3	2001/0045644 A1	11/2001	Huang			
	AH3						
	AI3						

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION
	AJ3						Yes No
	AK3						Yes No
	AL3						Yes No
	AM3						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AN	<u>3</u>	
	AO	<u>3</u>	
	AP	<u>3</u>	
	AQ	<u>3</u>	
	AR	<u>3</u>	

EXAMINER

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